

REMARKS

Claims 1-15 and 17-19 are pending in this application, claims 1-11 having been withdrawn from consideration. By this Amendment, claim 16 is canceled and claims 12, 17 and 18 are amended. Support for the amendments to claims 12, 17 and 18 can be found, for example, in original claims 12 and 16-18. No new matter is added. In view of the foregoing amendments and the following remarks, reconsideration and allowance are respectfully requested.

Rejection Under 35 U.S.C. § 103**A. Abileah and Molsen**

The Office Action rejects claim 12 under 35 U.S.C. § 103(a) over U.S. Patent 5,818,615 to Abileah et al ("Abileah") in view of U.S. Patent 6,573,959 to Molsen ("Molsen"). Applicant respectfully traverses the rejection.

Claim 12 recites "[a] process for producing a retardation element for use in a display element comprising pixels... the process comprising...curing the liquid crystal layer formed on the substrate by applying first radiation to the liquid crystal layer, a quantity of the first radiation applied to the liquid crystal layer being varied over a group of fine areas in the liquid crystal layer... bringing the cured liquid crystal layer into contact with an organic solvent to develop an uncured component of the liquid crystal layer; and further curing the cured liquid crystal layer subsequent to bringing the cured liquid crystal layer into contact with the organic solvent, wherein: each of the fine areas of the resulting retardation element has a thickness corresponding to the quantity of the first radiation applied to the respective one of the fine areas; and further curing the cured liquid crystal layer comprises applying second radiation to fully cure the uncured component of the cured liquid crystal layer" (emphasis added). Abileah and Molsen do not teach or suggest such a process.

The Office Action asserts that Abileah discloses patterned retardation films having different retardation values and corresponding to three colored subpixels. The Office Action further asserts that Abileah discloses that the retardation values of each retardation film of the respective subpixels is varied by varying a thickness thereof to create different retardation values. The Office Action admits Abileah does not disclose bringing the cured liquid crystal layer into contact with an organic solvent to develop an uncured component of the liquid crystal, but states that Molsen discloses such a process. Notwithstanding these assertions, Abileah and Molsen would not have rendered obvious the process of claim 12.

The Office action correctly points out that Abileah discloses patterned retardation films having different retardation values corresponding to three colored subpixels, where the retardation values of each retardation film of the respective subpixels is varied by varying the thickness thereof to create different retardation values (*see* Abileah column 18, line 28-column 20, line 4; Fig. 11), and Molsen discloses a method of manufacturing an optical element, which includes developing a layer (*see* Molsen column 5, lines 5-30). However, claim 12 recites that further curing of a cured liquid crystal layer comprises applying second radiation to fully cure an uncured component of the cured liquid crystal layer, subsequent to contact with an organic solvent. This feature is essential to stabilizing the optical properties of the present invention. *See* instant specification page 15, lines 19-23.

By performing the process of claim 12, each of the fine areas of the resulting retardation element has a thickness corresponding to the quantity of the first radiation applied to the respective one of the fine areas. Neither Abileah nor Molsen teach or suggest a combination of applying radiation, contacting with an organic solvent and then applying additional radiation can be used to obtain fine areas of differing thickness in a liquid crystal layer corresponding to an amount of exposure to the first dose of radiation applied to the respective fine areas. By practicing the method of claim 12, it is possible to obtain a

retardation element that, when incorporated in a display element comprising pixels, each of the pixels comprising a red display section, a green display section and a blue display section, provides excellent display characteristics. *See* instant specification, page 2, lines 16 to 23.

As neither Abileah nor Molsen teach or suggest a process, in which a liquid crystal layer is exposed to radiation, contacted with an organic solvent and then exposed to additional radiation in order to cure the uncured component of the cured liquid crystal layer to form a liquid crystal layer with fine areas of varying thickness corresponding to the amount of exposure to the first dose of radiation, the combination of Abileah and Molsen does not teach or suggest each and every feature of claim 12.

Claim 12 would not have been rendered obvious by Abileah and Molsen.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Abileah, Molsen, and Gunning

The Office action rejects claims 14, 16 and 18 under 35 U.S.C. § 103(a) over Abileah and Molsen in view of U.S. Patent 5,926,241 to Gunning ("Gunning"). Claim 16 is canceled, rendering the rejection moot as to that claim. As to the remaining claims, Applicant respectfully traverses the rejection.

For the reasons stated above Abileah and Molsen would not have rendered obvious the process of claim 12. Gunning is cited for alleging a process of fabricating a photo-patterned compensator, where a second radiation is applied to obtain said photo-patterned compensator, and a curing temperature above room temperature is employed. *See* Gunning step 335. However, Gunning does not disclose a process in which a liquid crystal layer is exposed to radiation, followed by contact with an organic solvent and then exposure to additional radiation to obtain a liquid crystal layer with fine areas of varying thickness corresponding to an amount of exposure of the first dose of radiation applied to the respective fine areas.

Further, the principle of the present invention makes clear that an "uncured component of the cured liquid crystal layer" includes a "semi-cured component of the cured liquid crystal layer". However, Gunning discloses first illumination with ultraviolet radiation through an aperture mask followed by second illumination with ultraviolet radiation. That is, according to Gunning, the regions are completely divided into polymerized regions and unpolymerized regions. Gunning cannot obtain semi-polymerized regions corresponding to the "semi-cured regions" that are possible by employing the process of claim 12. Accordingly, the description of Gunning is not relevant to the process of claim 12.

As neither Abileah, Molsen nor Gunning teach or suggest a process in which a liquid crystal layer is exposed to radiation, followed by contact with an organic solvent and then exposure to additional radiation to obtain a liquid crystal layer with fine areas of varying thickness corresponding to the amount of exposure to the first dose of radiation applied to the respective fine areas, the combination of references fails to teach or suggest each and every feature of the process of claim 12.

Claim 12 would not have been rendered obvious by Abileah, Molsen and Gunning. Claims 14 and 18 depend from claim 12, and, thus, likewise would not have been rendered obvious by Abileah, Molsen and Gunning. According reconsideration and withdrawal of the rejection are respectfully requested.

C. Abileah, Molsen, Gunning and Kuzuhara

The Office Action rejects claims 13, 15, 17 and 19 under 35 U.S.C. § 103(a) over Abileah, Molsen, Gunning in view of U.S. 2002/0041352 A1 to Kuzuhara et al ("Kuzuhara"). Applicant respectfully traverses the rejection.

For the reasons stated above Abileah, Molsen and Gunning would not have rendered obvious the process of claim 12. Kuzuhara is cited for its alleged disclosure that it is preferable to radiate the actinic rays in nitrogen to avoid delaying polymerization reaction so

as to reduce reaction time for effective hardening. However, Kuzuhara, like Abileah, Molsen and Gunning, fails to teach or suggest a process in which a liquid crystal layer is exposed to radiation, followed by contact with an organic solvent and then exposure to additional radiation to obtain a liquid crystal layer with fine areas of varying thickness corresponding to the amount of exposure to the amount of the first dose of radiation applied to the respective fine areas. As none of Abileah, Molsen, Gunning and Kuzuhara teaches or suggests such features, the combination of references does not teach or suggest each and every feature of the process of claim 12.

Claim 12 would not have been rendered obvious by Abileah, Molsen, Gunning and Kuzuhara. Claims 13, 15, 17 and 19 depend from claim 12, and, thus, likewise would not have been rendered obvious by Abileah, Molsen, Gunning and Kuzuhara. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15 and 17-19 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Petition for Extension of Time
Request for Continued Examination

Date: July 5, 2006

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